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EXAMINER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



### **DETAILED ACTION**

1. The amendment filed 12/01/09 have been entered and made of record.
2. Applicant's arguments with respect to claims 11-28 have been considered but are moot in view of the new ground(s) of rejection.
3. Claims 11-28 are pending.

### ***Claim Objections***

4. Claims 11, 24 are objected to because of the following informalities: "capable of" language is not a limitation and does not constitute any patentable sense .  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-12, 15, 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman (Patent No.: US 6,393,000 B1) in view of Hanning (Patent Number: 6,981,174 B1).

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Regarding to claim 11, Feldman '000 disclose detecting local conversational activity at each of said terminals (figure 1, station 4) respectively (figure 8, Voice activity detector, col. 4, lines 60-67, col. 5, lines 1-30),

sending conversational activity signals indicative of the local conversational activity condition from each of said terminals to the other terminal (Abstract, the principal signal) (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) ;

controlling said reception and transmission modules to communicate by half- duplex transmission of said conversational data packets in response to conversational activity at a first one of said terminals but not at the second one of said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) ;

However, Feldman '000 are silent to disclosing at least partially deactivating said reception module at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption.

Hanning '174 from the same or similar fields of endeavor disclose controlling said reception and transmission modules to communicate by half- duplex (col.3, lines 20-35, the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) transmission of said conversational data packets in response to conversational activity (col.6, lines 60-67, based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link) at a first one of said terminals but not at the second one of said terminals (col. 3, lines 20-40, determine whether fully or partially activate the redundant link );

at least partially deactivating said reception module at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption (col.3, lines 20-35, the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) (col.6, lines 60-67, based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Hanning '174 into the system of Feldman '000 in order to negotiate the speed and mode (duplex or half-duplex), since Wang '314 recited the motivation in the col. 3, lines 60-67 which solve the problem since the port is still connected to the bad upstream switch.

Regarding to claim 12, Feldman '000 disclose wherein controlling said reception module and said transmission module comprises at least partially switching off the supplies of power to said reception module and said transmission module (figure 8, col. 5, lines 1-30).

Regarding to claim 15, Feldman '000 disclose wherein said conversational data packets comprise voice signals and the duration of said time periods corresponds to a phoneme period (col. 3, lines 18-27).

Regarding to claim 17, Feldman '000 disclose wherein said conversational activity signals are distinct from said conversational data packets (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 18, Feldman '000 disclose wherein said local conversational activity detection is performed during each of said time periods at each of said terminals, and said conversational activity signals are sent from each of the terminals to the other

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terminal at least once during each of said time periods (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 19, Feldman '000 disclose where conversational activity signals are sent from each of the terminals to the other terminal in the same time slot pair and control the half-duplex (see abstract, half-duplex) transmission direction for the next time period ((col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 20, Feldman '000 disclose wherein at least a first one of said terminals communicates with a third terminal over a further communication link, said first terminal signalling a conversational activity signal indicative of conversational activity generated at said third terminal (col. 1, lines 65—col. 2, lines 2, the first station

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transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 21, Feldman '000 disclose wherein the same activity procedure is used in synchronization between all said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 22, Feldman '000 disclose wherein a different activity procedure is used in synchronization between one of said terminals and another of said terminals (A) than between said one of said terminals and a third one of said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data

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signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) .

Regarding to claim 23, Feldman '000 disclose wherein said further communication link is a cellular telephone link (col. 7, lines 5-35, GSM, TDMA, time frame)

Regarding to claim 24, Feldman '000 disclose A terminal for use in communication of conversational data signals with another terminal over a radio link, said terminal

comprising:

reception and transmission modules (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting);

radio link means for communicating conversational data packets over said radio link capable of full-duplex (col. 5, lines 60-67, full-duplex) transmission of conversational data packets in alternate directions within a pair of time slots (col. 3, lines 15-35, time slots) ,

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said communication comprising time periods (col. 7, lines 5-30, time frame) each comprising a set of said pairs of time slots (col. 7, lines 5-30, time frame); conversational activity detector for detecting local conversational activity at said terminal, signaling modules for sending in each of said periods a conversational activity signal indicative of the local conversational activity from the local terminal to said other terminal (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) and a control module responsive to conversational activity occurring at a first one of said terminals and not occurring at the second one of said terminals for controlling said reception and transmission means to communicate by half-duplex transmission of said conversational data packets (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

However, Feldman '000 are silent to disclosing at least partially deactivating said reception means at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption.

Hanning '174 from the same or similar fields of endeavor disclose controlling said reception and transmission modules to communicate by half- duplex (col.3, lines 20-35, the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) transmission of said conversational data packets in response to conversational activity (col.6, lines 60-67, based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link) at a first one of said terminals but not at the second one of said terminals (col. 3, lines 20-40, determine whether fully or partially activate the redundant link );

at least partially deactivating said reception module at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption (col.3, lines 20-35, the auto-negotiation protocol enables devices to negotiate the mode (duplex or half-duplex) (col.6, lines 60-67, based on the auto-negotiation protocol, detecting the status of the physical layer..determine whether to fully or partially activate the redundant link).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Hanning '174 into the system of Feldman '000 in order to negotiate the speed and mode (duplex or half-duplex), since Wang '314 recited the motivation in the col. 3, lines 60-67 which solve the problem since the port is still connected to the bad upstream switch.

Regarding to claim 25, Feldman '000 disclose wherein said control means comprises means for at least partially switching off the supplies of power to said reception means and said transmission means during said half-duplex transmission (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

7. Claims 13, 26 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Feldman '000 – Hanning '174) in view of Chauffour et al. (Patent Number: 5,870,397).

Regarding to claim 13, the combined system (Feldman '000 -Hanning '174) disclose the limitations of claim 11 above.

However, the combined system (Feldman '000 - Hanning '174) are silent to disclosing wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397 disclose wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 – Hanning '174), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

Regarding to claim 26, the combined system (Feldman '000 – Hanning '174) disclose the limitations of claim 23 above.

However, the combined system (Feldman '000 – Hanning '174) are silent to disclosing wherein said control means comprises means for generating audible comfort noise from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397 disclose wherein said control means comprises means for generating audible comfort noise from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice

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Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 – Hanning '174), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

Regarding to claim 27, the combined system (Feldman '000 – Hanning '174) disclose the limitations of claim 12 above.

However, the combined system (Feldman '000 – Hanning '174) are silent to disclosing wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397 disclose wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system

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(Feldman '000 – Hanning '174), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

8. Claims 14, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Feldman '000 – Hanning '174) in view of Wajda et al. (Patent No.: US 6,711,584 B1).

Regarding to claim 14, the combined system (Feldman '000 – Hanning '174) disclose the limitations of claim 11 above.

However, the combined system (Feldman '000 – Hanning '174) are silent to disclosing wherein said conversational data packets are communicated without return transmission of acknowledgement signals.

Wajda '584 disclose wherein said conversational data packets are communicated without return transmission of acknowledgement signals (col. 9, lines 55-60, speech information is to be exchanged in the framework of a conversation.....without acknowledgement of received data is requested).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wajda '584 into the combined system (Feldman '000 – Hanning '174), since Wajda '584 recited the motivation in the col. 2, lines 15-25, which determines in a simple convenient manner features of a communication relation

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which meet the desired requirement at a given time so that the communication relation can be established based these features.

Regarding to claim 28, the combined system (Feldman '000 – Hanning '174) disclose the limitations of claim 12 above.

However, the combined system (Feldman '000 – Hanning '174) are silent to disclosing wherein said conversational data packets are communicated without return transmission of acknowledgement signals.

Wajda '584 disclose wherein said conversational data packets are communicated without return transmission of acknowledgement signals (col. 9, lines 55-60, speech information is to be exchanged in the framework of a conversation.....without acknowledgement of received data is requested).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wajda '584 into the combined system(Feldman '000 - Hanning '174), since Wajda '584 recited the motivation in the col. 2, lines 15-25, which determines in a simple convenient manner features of a communication relation which meet the desired requirement at a given time so that the communication relation can be established based these features.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Feldman '000 – Hanning '174) in view of Mito et al. (Pub. No.: US 2002/0172185 A1).

Regarding to claim 16, Feldman '000 disclose wherein said conversational data packets are transmitted between said terminals over said radio link (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting)

However, the combined system (Feldman '000 – Hanning '174) are silent to disclosing wherein said conversational data packets are transmitted between said terminals over said radio link substantially in conformity with the Bluetooth standard.

Mito '185 disclose wherein said conversational data packets are transmitted between said terminals over said radio link substantially in conformity with the Bluetooth standard (see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Mito '185 into the combined system(Feldman '000 - Hanning '174), since Mito '185 recited the motivation in the paragraph [0025] which improve the use efficiency of time division channels and reducing useless power consumption.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sheikh Ayaz can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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